CLAIMS

1. An optical disk apparatus comprising:

a light source;

an objective lens for converging light emitted from the light source toward an optical disk;

a first photodetection device for detecting reflected light from the optical disk and outputting a first signal;

a signal processing section for receiving the first signal and generating a signal containing information recorded on the optical disk;

a second photodetection device for detecting a portion of the light emitted from the light source and outputting a second signal;

a light source driving section for receiving the second signal, and based on the second signal, driving the light source so that output power of the light source equals a target value; and

an amplitude fluctuation detection section for detecting an amplitude fluctuation amount of the second signal, and if

the amplitude fluctuation amount exceeds a predetermined value, changing driving characteristics of the light source driving section.

2. The optical disk apparatus of claim 1, wherein the light source driving section includes a current control section for receiving the second signal and generating a driving current which is controlled so that the output power of the light source equals the target value, and a high-frequency module for modulating the driving current with a predetermined frequency and oscillation power.

3. The optical disk apparatus of claim 2, wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes a modulation frequency of the high-frequency module.

4. The optical disk apparatus of claim 2, wherein the amplitude fluctuation detection section detects the amplitude

fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes an oscillation power of the high-frequency module.

5. The optical disk apparatus of claim 2, wherein the current control section generates the driving current based on a predetermined frequency component of the second signal, and the predetermined frequency component is approximately 1/10 or less of a frequency of the first signal.

6. The optical disk apparatus of claim 3, wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes the target value in the current control section.

7. The optical disk apparatus of claim 6, wherein the amplitude fluctuation detection section receives the first signal, and based on the first signal, detects an amplitude fluctuation amount of a component of the second signal that

is in synchronization with the first signal.

8. The optical disk apparatus of claim 1, wherein the amplitude fluctuation detection section includes a high-pass filter, and detects the amplitude fluctuation amount of the second signal having passed through the high-pass filter.

9. The optical disk apparatus of claim 1, wherein the amplitude fluctuation detection section changes an oscillation power in accordance with the type of the optical disk.

10. An information recording/reproduction method by an optical disk apparatus including: a light source; an objective lens for converging light emitted from the light source toward an optical disk; a first photodetection device for detecting reflected light from the optical disk and outputting a first signal; and a signal processing section for receiving the first signal and generating a signal containing information recorded on the optical disk, the

information recording/reproduction method comprising:

a step of detecting a portion of the light emitted from the light source and outputting a second signal;

a step of receiving the second signal, and based on the second signal, driving the light source so that output power of the light source equals a target value; and

a step of detecting an amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds a predetermined value, changing driving characteristics in the step of driving the light source.

11. The information recording/reproduction method of claim 10, wherein the step of driving the light source includes a step of receiving the second signal and generating a driving current which is controlled so that the output power of the light source equals the target value, and a step of modulating the driving current with a predetermined frequency and oscillation power.

12. The information recording/reproduction method of

claim 11, wherein the step of changing the driving characteristics detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes a modulation frequency in the modulation step.

13. The information recording/reproduction method of claim 11, wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes an oscillation power of the high-frequency module.

14. The information recording/reproduction method of claim 11, wherein the step of driving the light source executes a step of generating the driving current based on a frequency component of the second signal, the predetermined frequency component being approximately 1/10 or less of a frequency of the first signal.

15. The information recording/reproduction method of claim 11, wherein the step of changing the driving characteristics detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes the target value in the step of generating the driving current.

16. The information recording/reproduction method of claim 15, wherein the step of changing the driving characteristics receives the first signal, and based on the first signal, detects an amplitude fluctuation amount of a component of the second signal that is in synchronization with the first signal.

17. The information recording/reproduction method of claim 10, wherein the step of changing the driving characteristics further includes a step of removing a low-range component from the second signal, and detects the amplitude fluctuation amount of the signal from which the low-range component has been removed.

18. The information recording/reproduction method of claim 10, wherein the step of changing the driving characteristics changes an oscillation power in accordance with the type of the optical disk.